CDM

Contaminant Screening Study
Libby Asbestos Site, Operable Unit 4
Libby, Montana

Final Sampling and Analysis Plan Addendum for the Libby Drive In Theater

September 2002

Sampling and Analysis Plan Addendum

Response Action Contract
for Remedial, Enforcement Oversight, and Non-Time
Critical Removal Activities at Sites of Release or
Threatened Release of Hazardous Substances
in EPA Region VIII

U.S. EPA Contract No. 68-W5-0022

Final Sampling and Analysis Plan Addendum for the Libby Drive In Theater, Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4

September 26, 2002

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Contents

Acronyms

bgs	below ground surface
CDM	CDM Federal Programs Corporation
CSS	Contaminant Screening Study
ft	feet/foot
GPS	global positioning system
IR	infrared
pt	point
QC	quality control
SAP	sampling and analysis plan
SEM	scanning electron microscopy
Site	Libby Drive In Theater
SOP	standard operating procedures

Section 1
Introduction

This addendum outlines the site-specific requirements to conduct the contaminant screening study (CSS) at the Libby Drive In Theater (Site). All rationale, data quality objectives, quality assurance procedures, and standard operating procedures (SOPs) from the CSS sampling and analysis plan (SAP) still apply (CDM Federal Programs Corporation [CDM] 2002).

1.1 Site Location and Background

The Site is situated northwest of the Town of Libby, Montana on the north side of U.S. Highway 2 and west of Parmenter Creek. The address for the Site is:

1144 U.S. Highway 2 West
Libby, Montana 59923

The Site encompasses approximately 2 acres and includes a concession stand in the parking area and a ticket booth at the entrance. The concession stand has an attic and the ticket booth is a small wooden structure. It is unlikely that either structure is insulated with vermiculite because both are only used during summer months.

The Site is owned by Mrs. Emelia Huber who purchased it in August 1980. It is currently used as a drive in theater and was used as such prior to being purchased by Mrs. Huber. The theater is usually open from approximately Memorial Day through Labor Day but was not opened this year. There has been no known sampling on the property in the past.

1.2 Objective

The objective of this addendum is to present a site-specific sampling plan to conduct the CSS at the Site.

Section 2
Field Activities

CSS activities at the Site will consist of a verbal interview, visual inspection, and surface soil sampling.

2.1 Verbal Interview

A verbal interview to discuss concerns and obtain historical information about the Site will be conducted by field personnel with the current owner, Mrs. Huber or the Drive In Theater's manager. At that time, field personnel will complete an information field form (CDM 2002).

2.2 Visual Inspection

The field team will conduct an inspection for visible vermiculite of the entire property including all structures (i.e., concession stand and ticket booth). Soil samples will only be collected from areas indicated in Figure 2-1. The team will record specific details in the field logbook and on the property sketch portion of the information field form. This will include the location of contaminated source, depth observed during sampling, and anecdotal estimates of how long the contaminated source material has existed on the property. No additional effort will be conducted to determine the depth below ground surface to which the source extends.

2.3 Soil Sampling

The soil sampling process, as discussed in the CSS SAP, will involve the following steps:

- Locate the predetermined sample location and select composite subsample locations
- *Collect samples from composite locations*
- Complete the sample field forms included in Attachment (e.g., record subsample locations) and sketch additional structures, features, etc. not already on the Site map
- Decontaminate all nondisposable sampling equipment

2.3.1 Sample Locations and Rationale

Sample locations are mapped on each of the Site figure (Figure 2-1), with the State Plane coordinates listed next to them. To select the sampling locations, the Site was gridded into approximately 125 foot by 125 foot squares. The center of each grid square was chosen as a sampling location unless the center was not within the Site boundaries. If the center was not within the boundaries, the sampling location for that grid was either deleted or moved to a point on the property. This sampling design was selected to provide an even distribution of samples across the Site which will generally characterize the nature and extent of contamination across the property.

Each coordinate set will be located using the navigation function of the global positioning system (GPS) equipment. Once located, the coordinates will be quality control (QC) checked by a second field member. If the sample location needs to be moved, the new coordinates will be recorded. This location will be considered the center subsample location. Each sample will be a composite of five subsamples, one from the center location and four from 10 feet (ft) away from the center in each of four directions (i.e., north, south, east, and west) (Figure 2-1).

2.3.2 Sample Collection

Surface soil samples will be collected from all designated sample locations. The locations of these samples are provided in Figure 2-1. Sampling is expected to last approximately 1 day.

Surface soil samples will extend from the surface to approximately 6 inches below ground surface (bgs). All surface samples will be collected in accordance with procedures identified in the CSS SAP (CDM 2002). The surface samples will only identify surficial contamination and, therefore, if any subsurface contamination is anticipated from the surface sample analyses, subsurface samples may be collected at a later date.

All samples will consist of a 5-point (pt) composite. The 5-pt composite sample will be comprised of a center subsample located at the coordinates listed in the Site figure and four additional subsamples approximately 10 ft on each directional side of the center subsample (i.e., north, south, east, and west). QC samples will be collected in accordance with the CSS SAP except rinsates will not be collected and equipment blanks will be collected at a rate of one per 20 normal samples (e.g., instead of one per day) (CDM 2002).

2.3.3 Field Form Completion and Feature/Structure Sketch

For each sample collected, a field sample data sheet for soil (Attachment 1) will be completed. Each form will identify the samplers, sample identification numbers, and location of subsamples and will be completed in accordance with SOP CDM-LIBBY-03, Completion of Field Sample Data Sheets and Addendum No. 1. The sample identification number associated with the sample point will be in the form of CS-######. For each sample collected, a GPS point will be recorded from the center location of the subsamples. The other subsample locations will be identified using a compass and measuring instrument. For each of these non-center subsample locations, the distance and direction from the center location will be recorded. Any obstacles or reasons for movement or deletion of a sample or subsample will be recorded on the field form. Additionally, any structure or other relevant feature (e.g., lumber piles, roads, drainage ditches, utility poles, etc.) not already on the Site figure will be sketched onto a copy of the Site figure or sample form.

2.3.4 Decontamination

All decontamination will be conducted in accordance with the CSS SAP. All non-disposable sampling equipment will be decontaminated between sample locations but will not be decontaminated between subsample locations.

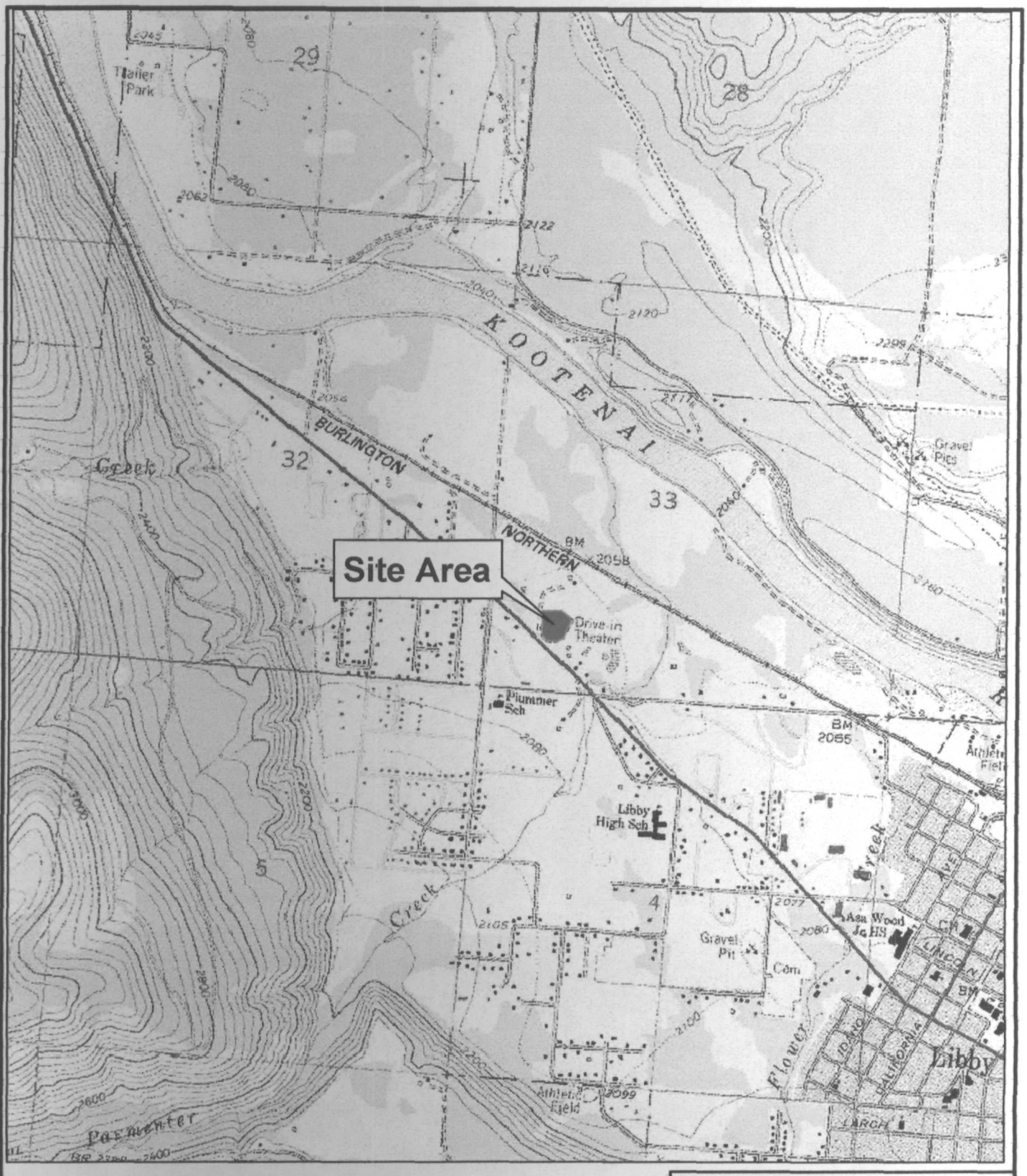
Section 3
Sample Analysis and Data Validation

Soil samples will be analyzed for Libby asbestos by the infrared spectroscopy (IR) me thod (ISSI-LIBBY-02 located in the CSS SAP). Depending on sample results, a sample split may be submitted for analysis using the scanning electron microscopy (SEM) method (Asbestos Analysis of Soil by Scanning Microscopy and Energy Dispersive X-Ray Spectroscopy, Revision 0, May 6, 2002). This determination will be made by the CDM laboratory coordinator. All data validation and evaluation will be conducted in accordance with Section 7 of the CSS SAP (CDM 2002).

Section 4
References

CDM. 2002. Final Sampling and Analysis Plan, Remedial Investigation, Contaminant Screening Study. April.

U.S. Environmental Protection Agency. 2002. Asbestos Analysis of Soil by Scanning Microscopy and Energy Dispersive X-Ray Spectroscopy, Revision 0. May.

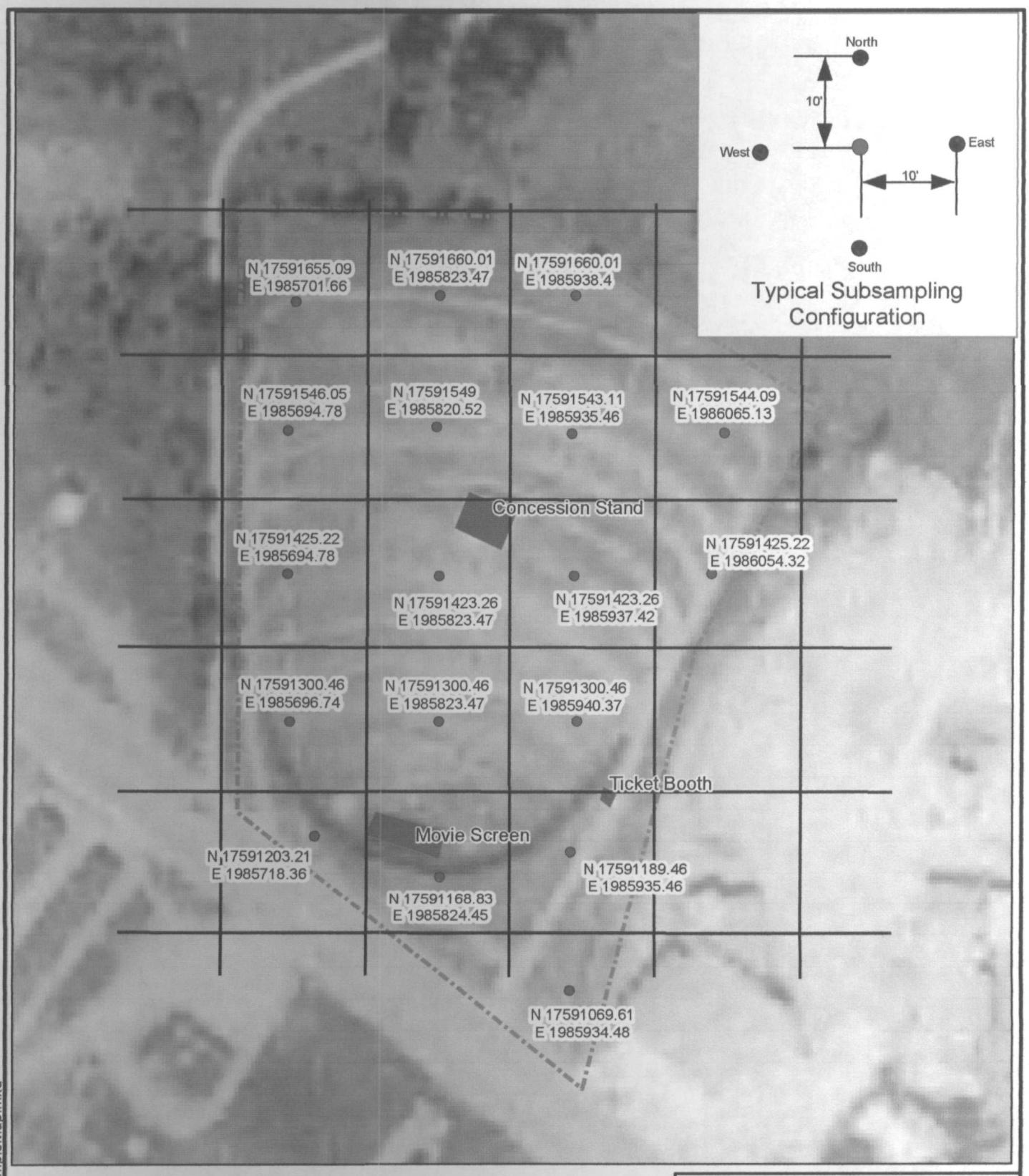


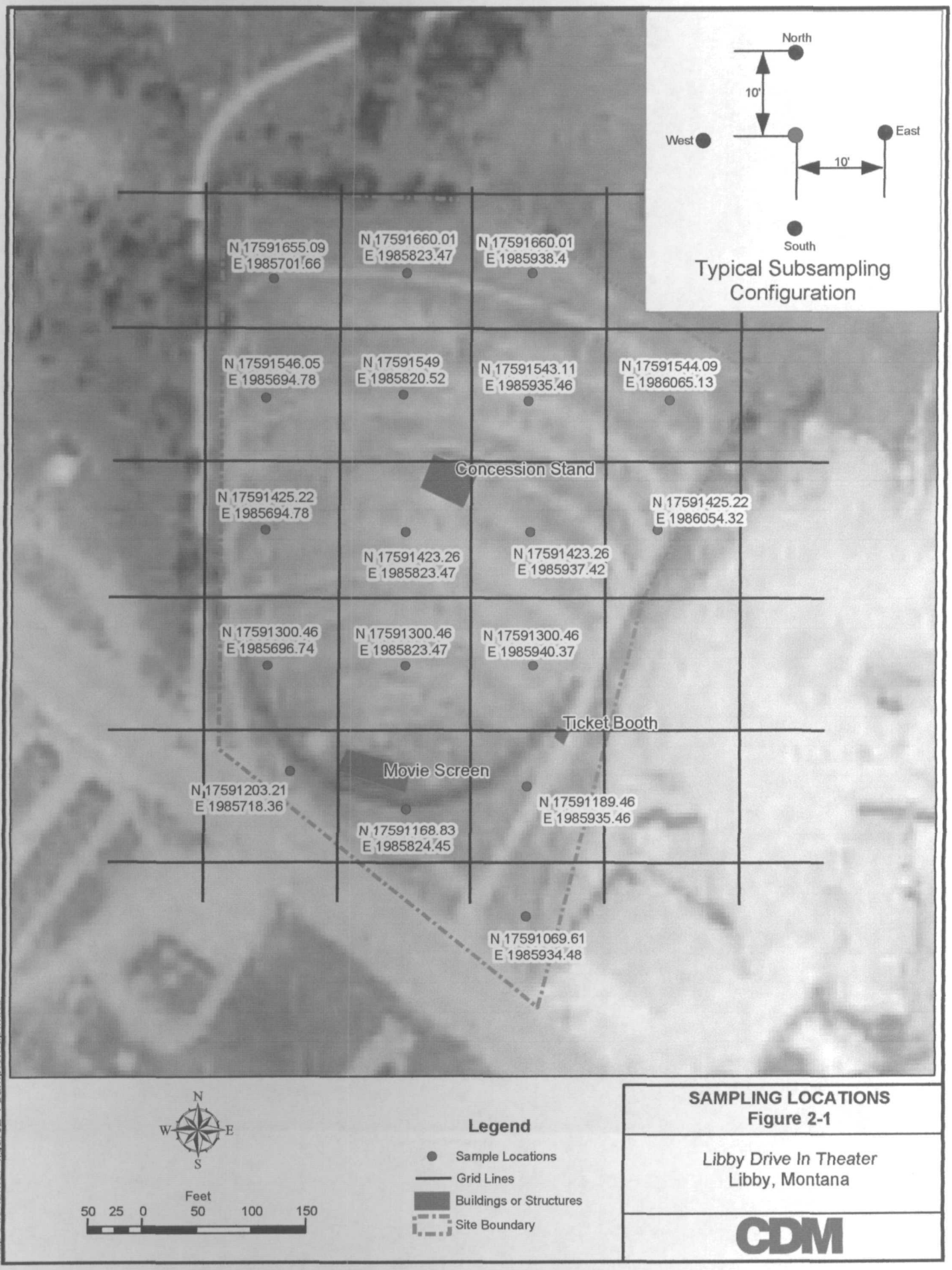
Map Filename: figure1-1SiteLocationMap.mxd

SITE LOCATION
Figure 1-1

Libby Drive In Theater
Libby, Montana

CDM


North
10'
West
East
10'
South
Typical Subsampling Configuration
N 17591655.09
E 1985701.66
N 17591660.01
E 1985823.47
N 17591660.01
E 1985938.4
N 17591546.05
E 1985694.78
N 17591549
E 1985820.52
N 17591543.11
E 1985935.46
N 17591544.09
E 1986065.13
Concession Stand
N 17591425.22
E 1985694.78
N 17591425.22
E 1986054.32
N 17591423.26
E 1985823.47
N 17591423.26
E 1985937.42
N 17591300.46
E 1985696.74
N 17591300.46
E 1985823.47
N 17591300.46
E 1985940.37
Ticket Booth
Movie Screen
N 17591203.21
E 1985718.36
N 17591189.46
E 1985935.46
N 17591168.83
E 1985824.45
N 17591069.61
E 1985934.48
N
W
E
S
Feet
50 25 0 50 100 150
Legend
Sample Locations
Grid Lines
Buildings or Structures
Site Boundary
SAMPLING LOCATIONS
Figure 2-1
Libby Drive In Theater
Libby, Montana
CDM
Map Filename: figure2-1SampleMap.mxd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E 1985935.46
N 17591168.83
E 1985824.45
N 17591069.61
E 1985934.48
N
W
E
S
Feet
50 25 0 50 100 150
Legend
Sample Locations
Grid Lines
Buildings or Structures
Site Boundary
SAMPLING LOCATIONS
Figure 2-1
Libby Drive In Theater
Libby, Montana
CDM
Map Filename: figure2-1 SampleMap.mxd

Attachment 1
Field Sample Data Sheet for Soil and SOP CDM-LIBBY-03 Addendum No. 1

Sheet No.: CSS (S) - _____

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL

Scenario No.: _____ Field Logbook No: _____ Page No: _____ Sampling Date: _____

Address: _____ Owner: _____

Business Name: _____

Land Use: (circle) Residential School Commercial Mining Roadway Other ( )

Sampling Team: (circle) CDM PES Other _____ Names: _____

Data Item	Sample 1	Sample 2	Sample 3
Index ID			
Location ID			
Sample Group			
Location Description (circle)	Back yard Front yard Side yard Other _____	Back yard Front yard Side yard Other _____	Back yard Front yard Side yard Other _____
Category (circle)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other _____	Surface Soil Other _____	Surface Soil Other _____
Type (circle)	Grab Comp. # subsamples _____	Grab Comp. # subsamples _____	Grab Comp. # subsamples _____
Sample Time			
Top Depth (in.)			
Bottom Depth (in.)			
Field Comments	BD-_____		
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	
QC by	

Addendum to Completion of Field Sample Data Sheets

Project: Libby Asbestos Remedial Investigation - Contaminant Screening Study (CSS

Project Number: 3282-116

Specific Site: Stimson Lumber Company Area

Document No.: CDM-LIBBY-03 ADDENDUM NO. 1

Project Manager: [signature] Date: 8/29/02

Technical Reviewer: [signature] Date: 8/29/02

EPA Approval: _____ Date: _____

The field sample data sheet (FSDS) must be completed using the original SOP and this Addendum for the Stimson Lumber Company Area.

All categories will be completed in accordance with the original SOP with the following changes and/or additions:

Address: The center sample coordinates. If center sample coordinates change (e.g., the subsurface sample center coordinates are different than the surface sample), then a new FSDS will be completed. Coordinates are to be entered in the following format:

N - Number, E - Number

Sample Group: The sample group for the Stimson Lumber Company Area soil samples do not have to be one of the list in the original SOP. The sample group should describe the surrounding area (e.g., forest, field, log yard, etc.).

Location Description: The subarea where the center sample is located.

Field Comments: The subsample locations should be identified here. Locations are to be entered in the following format:

1) Direction (e.g., N5°E), Feet from Center Sample (e.g., 12.5')
2) Direction (e.g., N80°E), Feet from Center Sample (e.g., 11')
3) Direction (e.g., N85°WE), Feet from Center Sample (e.g., 15')
4) Direction (e.g., S10°E), Feet from Center Sample (e.g., 19')

Also in this field, any obstacles should be noted along with reasons for moving a location or not collecting one of the four subsamples.